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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,265	09/28/2005	Peter Westphal	3081.124US01	3380
24113 7590 08/08/2007 PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A. 4800 IDS CENTER 80 SOUTH 8TH STREET MINNEAPOLIS, MN 55402-2100			EXAMINER CHAMBERS, TRAVIS SLOAN	
			ART UNIT 2833	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/551,265	Applicant(s) WESTPHAL ET AL.	
	Examiner Travis Chambers	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/01/2006 and 09/28/2005</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-3, 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573).

In reference to claim 1, Fujihara teaches receiving apparatus (13 ; figure 3a) that can be attached to an equipment housing or that is positioned in said equipment housing; is provided such that said LED (2 ; figure 4) can be positioned upstream of a light emission aperture (4 ; figure 4) of said housing with the effective wavelength that is required for measurements and/or observations.

However Fujihara does not teach a receiving apparatus that is rotatable about an axis of rotation is provided with mounts for each of at least one LED, whereby the receiving apparatus is arranged in a housing and in that a drive device for defined adjustment of said receiving apparatus

Thomas teaches a receiving apparatus ( 40 ; figure 2) that is rotatable about an axis of rotation is provided with mounts (portion on 40 where 26 ; figure 2 is attached to) for each of at least one LED (26 ; figure 2), whereby the receiving apparatus (40) is

arranged in a housing (10 ; figure 2) and in that a drive device (42 ; figure 1) for defined adjustment of said receiving apparatus (40).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 30 -50 , it allows the user better control of by being able to illumination output to better observe an object..

In reference to claim 2, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach said mounts are embodied and attached to said receiving apparatus such that the main emission direction of said at least one LED arranged thereon runs parallel to said axis of rotation.

Thomas teaches teach said mounts (portion of 40 where 26 ; figure 2 is attached to) are embodied and attached to said receiving apparatus (40 ; figure 2) such that the main emission (light being emitted upward) direction of said at least one LED (26 ; figure 2) arranged thereon runs parallel to said axis of rotation.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 30 -50, it improves the illumination of an object being observed by having the emitted light directed upward to an eyepiece.

In reference to claim 3, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach the mounts of said receiving apparatus are embodied such that the emission direction of said at least one LED arranged thereon runs radial to said axis of rotation.

Thomas teaches the mounts (portion of 40 where 26 ; figure 2 is attached to) of said receiving apparatus (40) are embodied such that the emission direction (being emitted from the side portion of the transparent body of the LED) of said at least one LED (26 ; figure 2) arranged thereon runs radial to said axis of rotation.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 15-35 , it improves the illumination of an object being observed by allowing more light to be emitted so the user can receive more light through the eyepiece.

In reference to claim 11, Fujihara teaches in combination with a microscope (Col. 2 line(s) 45 – 50).

In reference to claim 12, Fujihara teaches with a light emission aperture (4 ; figure 1) alignable with the illumination ray path

However Fujihara does not teach a housing, an LED receiving apparatus rotatably mounted within the housing, the receiving apparatus having an axis of rotation; a plurality of LEDs, the LEDs each having light emission of different spectral

characteristics, the LEDs mounted to the receiving apparatus whereby one of the LEDs of the plurality of LEDs may be selectively rotationally positioned upstream of the light emission aperture.

Thomas teaches a housing (10), an LED receiving apparatus (40 ; figure 2) rotatably mounted within the housing (10 ; figure 2), the receiving apparatus (40) having an axis of rotation; a plurality of LEDs (26 ; figure 2), the LEDs (26 ; figure 2) each having light emission of different spectral characteristics, the LEDs (26) mounted to the receiving apparatus (40) whereby one of the LEDs (26) of the plurality of LEDs (26) may be selectively rotationally positioned.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 30 -50 , it allows the user better control of by being able to illumination output to better observe an object..

In reference to claim 13, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach each of the LEDs has a main emission direction and wherein said main emission direction of each of the LEDs is aligned with the axis of rotation of the receiving apparatus.

Thomas teaches each of the LEDs (26 ; figure 2) has a main emission direction (being upward) and wherein said main emission direction of each of the LEDs (26) is aligned with the axis of rotation of the receiving apparatus (40 ; figure 2).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Martino et al. ( 4292663).

In reference to claim 16, Fujihara teaches in combination with a microscope (Col. 2 line(s) 45 – 50).

However Fujihara does not teach the light source attached to the microscope.

Martino teaches the light source (93 ; figure 3) attached to the microscope (11 ; figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Martino to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of ReferenceB because it provides an easier way to contain all of the pieces to the equipment thus improving transportation.

Claims 4 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Hutzet et al. ( 6428172) further in view of Li (6856727).

In reference to claim 4, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach a collimator optics is provided in the equipment housing.

Fujihara teaches a collimator optics (19b ; figure 11).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Fujihara of figure 11 to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Fujihara because it provides the user control for filtering the undesired rays of light to better improve the users observation of an object.

Further Fujihara does not teach of a radiation homogenizer.

Li teaches of a radiation homogenizer (Col. 1, line(s) 17-24).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Li to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Li because, as taught by Li (Col. 1 lines 17-24), it improves the quality of the illumination of an object by maximizing the brightness of the electromagnetic radiation at the target.

In reference to claim 14, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach a collimator optics placeable in the light emission of the LED.

Fujihara teaches a collimator optics (19b ; figure 11) placeable in the light emission of the LED (1 ; figure 11).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Fujihara of figure 11 to improve the invention of Fujihara.



One skilled in the art would have been motivated to use the teachings of Fujihara because it improves filtering emitted light rays and improves the users observation of an object.

Further Fujihara does not teach of a radiation homogenizer placeable in the light emission of the LED.

Li teaches of a radiation homogenizer (Col. 1, line(s) 17-24).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Li to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Li because, as taught by Li (Col. 1 lines 17-24), it maximizes the brightness of the electromagnetic radiation emitted to the target, improving the quality of observation of an object.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Tieszen (6663260).

In reference to claim 5, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach at least one of said LEDs is a white light LED emitting a white light.

Tieszen teaches wherein at least one of said LEDs (24 ; figure 1a) is a white light LED emitting a white light.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Tieszen to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Tieszen because, as taught by Tieszen Col. 3 line(s) 40 -50, it improves costs operation by increasing the life expectancy of the LED.

Claims 6, 9, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Yoneda et al. ( 20030147254).

In reference to claim 6, Fujihara in view of Thomas shows substantially the invention as claimed.

However Fujihara in view of Thomas does not teach a Peltier cooling element for cooling said LED is provided arranged between said mount of said receiving apparatus and said LED arranged thereon.

Yoneda teaches a Peltier cooling element (10 ; figure 20) for cooling said LED (2 ; figure 20) is provided arranged between said mount (11 ; figure 20) of said receiving apparatus (6 ; figure 20) and said LED (2) arranged thereon.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Yoneda to improve the invention of Fujihara in view of Thomas.

One skilled in the art would have been motivated to use the teachings of Yoneda because, as taught by Yoneda [0147], it improves cooling of the surrounding elements from heat damage by providing an outlet to remove excess heat.

In reference to claim 9, Fujihara in view of Thomas shows substantially the invention as claimed.

However Fujihara does not teach at least one LED is arranged exchangeably in said mount without said an associated Peltier cooling element.

Thomas teaches at least one LED (26 ; figure 2) is arranged exchangeably in the mount (40 ; figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 30 -50 , the light level is better controlled by the user so they can observe a specimen easier.

Further however Fujihara does not teach of an associated Peltier cooling element.

Yoneda teaches of an associated Peltier cooling element.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Yoneda for the invention of Fujihara and mount the Peltier cooling element on all but one LED.

One skilled in the art would have been motivated to use the teachings of Yoneda because, as taught by Yoneda [0147], it saves manufacturing cost and time by omitting at least one LED that has low heat emission and it improves cooling the LEDs that have higher heat emission attached to it.

In reference to claim 10, Fujihara in view of shows substantially the invention as claimed:

However Fujihara in view of Thomas does not teach wherein said at least one LED is securely joined to said associated Peltier cooling.

Yoneda teaches said at least one LED (2 ; figure 20) is securely joined to said associated Peltier cooling element (10 ; figure 20).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Yoneda to improve the invention of Fujihara in view of Thomas.

One skilled in the art would have been motivated to use the teachings of Yoneda because, as taught by Yoneda [0147], it improves the lifetime and cooling of the LED from heat damage by providing an outlet to remove excess heat.

Further however Fujihara does not teach LED can be arranged exchangeably in said mount together therewith.

Thomas teaches the LED (26 ; figure 2) can be arranged exchangeably in said mount (40 ; figure 2) together therewith.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Thomas to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Thomas because, as taught by Thomas Col. 3 line(s) 30 -50 , the illumination is better controlled by the user so they can observe a specimen easier.

However Fujihara does not teach a Pfieler, cooling element

In reference to claim 15, Fujihara shows substantially the invention as claimed.

However Fujihara does not teach a Peltier cooling element attached to an LED.

Yoneda teaches a Peltier cooling element (10 ; figure 20).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Fujihara to attach to an LED in the invention of Peltier.

One skilled in the art would have been motivated to use the teachings of Yoneda because, as taught by Yoneda [0147], it improves the dissipation of heat from the LED and protects them from damage due to over heating.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Futami et al. (6386743).

In reference to claim 7, Fujihara in view of Thomas shows substantially the invention as claimed.

However Fujihara in view of Thomas does not teach wherein a halogen light source or another light source is arranged on at least one mount of said receiving apparatus.

Futami teaches of a halogen light source (2 ; figure 1) or another light source is arranged on at least one mount (opening portion of 3 ; figure 2) of said receiving apparatus (3 ; figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Futami to improve the invention of Fujihara in view of Thomas.

One skilled in the art would have been motivated to use the teachings of Futami because, as taught by Futami Col. 11 line(s) 9-15, it improves the lifetime of the light source and improves the intensity of light emitted to better illuminate the observed object.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujihara et al. ( 4852985) in view of Thomas et al. ( 6758573) further in view of Rifkin et al. ( 4555749).

In reference to claim 8, Fujihara in view of Thomas shows substantially the invention as claimed.

However Fujihara in view of Thomas does not teach a rapid change ring in the form of a dovetail.

Art Unit: 2833

Rifkin teaches a rapid change ring in the form of a dovetail (46 ; figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Rifkin to improve the invention of Fujihara.

One skilled in the art would have been motivated to use the teachings of Rifkin because, as taught by Rifkin Col. 1 line(s) 35-51, it improves the securing and mounting of the attached equipment by providing a reliable arrangement for securement in the housing.

### ***Conclusion***

The prior listed on PTO form 892 that is made of record is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis Chambers whose telephone number is 571-272-6813. The examiner can normally be reached on Monday-Friday 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 571-272-2001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Travis Chambers  
TC  
8/1/2007

/James Harvey/  
James Harvey  
Primary Examiner